

CARRYING HANDLE OF LUGGAGE

BACKGROUND OF THE INVENTION

1. Field of The Invention

5 The present invention relates to luggage handle and more particularly to an upper hand engageable carrying handle of a luggage case with improved characteristics.

2. Description of Related Art

10 Conventionally, a handle of luggage is of a hard-side (e.g., molded thermoplastic) construction for prolonging the useful life of luggage. Further, a carrying handle provided in addition to the pulling handle in some types of luggage. Such carrying handle typically has an ergonomically curved shape in most portions thereof for ease of holding by a user and two ends being perpendicular relative to a top of the luggage. For maintaining the structural
15 strength, the ends are formed to have large projections. This is not unsightly and is not desirable. Thus, ends of a carrying handle having smaller projections have been developed. However, it may sacrifice the structural strength in favor of the luggage's appealing appearance. This is still not desirable..

20 For overcoming the above problem, a small carrying handle formed of pliable material is available. Moreover, two ends of the carrying handle are formed with flexible extensions so as to give an enlarged space to the hand while lifting the carrying handle. However, the extensions have recessed gap portions after lifting the carrying handle such that fingers, skirt, hose, or the like easily inserted in the recessed gap may be hurt or scraped if enough care is not
25 taken. Thus, the need for improvement still exists.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a carrying handle of a luggage case, comprising an intermediate grip including two end extensions each having an elongated opening; two end connecting mechanisms each including a first post and a second post each having inner threads at inside wherein the first post is inserted into the opening and the luggage case and the connecting mechanism are fastened together by driving two fasteners through a top of the luggage case into the first and the second posts respectively; and two bellows mechanisms each including a bellows member interconnected the grip and the connecting mechanism; whereby lifting the grip will move the extensions toward a center of the grip and expand the bellows mechanisms toward the center of the grip until one end of either opening is stopped by the first post and form a space between the grip and the top of luggage case. By utilizing the present invention, the problem of hurting a user by the end portions of the carrying handle while lifting the same is substantially eliminated.

The above and other objects, features and advantages of the present invention will become apparent from the following detailed description taken with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a preferred embodiment of carrying handle of luggage according to the invention;

FIG. 2 is an exploded view of the carrying handle in FIG. 1;

FIGS. 3 and 4 are sectional views of the carrying handle in nonoperating and operating positions respectively;

FIGS. 5 and 6 are bottom views of one end portion of the carrying handle in nonoperating and operating positions respectively; and

FIG. 7 is a perspective view of a luggage case incorporating the carrying handle according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

5 Referring to FIGS. 1 to 4, a carrying handle of luggage constructed in accordance with the invention is shown. The carrying handle comprises an intermediate grip 10, two connecting mechanisms 30 at both ends, and two bellows mechanisms 20 each flexibly interconnected the grip 10 and the connecting mechanism 30. Each component will be described in detail below.

10 The grip 10 is an elongated member and comprises two elongated end extensions 11 each having an elongated opening 12. The bellows mechanism 20 comprises a bellows member 21 made of flexible material, the bellows member 21 having a section of substantially elliptical shape, a supporting plate 23 at one end, and a neck 22 interconnected the supporting plate 23 and the
15 bellows member 21. The connecting mechanism 30 comprises a cap 31, first post 32 and second post 33 each having inner threads extended downward from the bottom of the cap 31, a recess 34 open to an inner end 37, and two inwardly extending stops 35 and 36 at opposite sides of the end 37.

An assembly of the invention will now be described in detail below. The
20 carrying handle has a bilaterally symmetrical shape so that description of one side serves to describe the entirety. Mounting the bellows mechanism 20 is by inserting the bellows member 21 into the end extensions 11 of the grip in a place between an inner end 13 (i.e., stop member) of the extension 11 and the end 37 of the connecting mechanism 30. Insert the first post 32 into the opening
25 12. Next, drive screws 41 and 42 through a top of luggage case 70 into the first and second posts 32 and 33 respectively for fastening the carrying handle on the luggage. Hence, the opening 12 is able to move laterally relative to the first

post 32 in a maximum distance about equal to the length thereof. The characteristics of the carrying handle are detailed below. The bellows member 21 is held captive by fastening the neck 22 in the recess 34. The bellows member 21 may expand or compress laterally as the extension 11 moves
5 relative to the end 37 such that the bellows member 21 is able to always fill a gap between the end 37 and the inner end 13 of the extension 11. This configuration can preserve the carrying handle's appearance.

An operation of the invention will now be described in detail below by referring to FIG. 4 specifically. The extension 11 moves toward center of the grip
10 10 until a left end 121 of the opening 12 is stopped by the first post 32 when a user inserts his/her fingers into a small gap between the grip 10 and the top of luggage case 70. Thus, a space is formed between the grip 10 and the top of luggage case 70. Next, the hand can sufficiently hold the grip 10. At the same time, the bellows mechanism 20 expands laterally as the inner end 13 of the
15 extension 11 moves away from the end 37. Thus, as stated above, the bellows member 21 is able to always fill a gap between the end 37 and the inner end 13 of the extension 11.

Referring to FIG. 5, there is shown a bottom view of one end portion of the carrying handle in a nonoperating position. As seen, the extension 11 is inserted
20 into the bellows member 21 with the first post 32 passed the opening 12. Also, a right end 122 of the opening 12 is engaged with the first post 32. Thus, the bellows member 21 is compressed between the stops 35 and 36 and the inner end 13 of the extension 11.

Referring to FIG. 6, there is shown a bottom view of one end portion of the
25 carrying handle in an operating position (i.e., lifting the grip 10 by the hand). As seen, the left end 121 of the opening 12 is stopped by the first post 32 after moving the opening 12 toward center of the grip 10. The bellows member 21

expands laterally as the inner end 13 of the extension 11 moves away from the end 37. Thus, as stated above, the bellows member 21 is able to always fill a gap between the end 37 and the inner end 13 of the extension 11.

Referring to FIG. 7, there is shown a luggage case 70 incorporating the
5 aesthetic carrying handle according to the invention.

While the invention herein disclosed has been described by means of specific embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.

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